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Subject: April 1, 2003 Index of Winter Severity
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Here are the Index of Winter Severity (IWS) values for April 1, 2003.

The Index of Winter Severity (IWS) is obtained by combining snow water equivalent, critical temperature, and forage availability components to reflect conditions on the winter range. The IWS has a scale from +4 to -4, with +4 representing the mildest conditions and -4 indicating the most severe conditions. The IWS is calculated for each winter range and each species to represent the variation from normal. It is intended to provide a spatially and temporally standardized indication of climatic conditions on the winter range. The response of individual animals, or groups of animals will vary depending on a variety of factors.

The IWS procedure is described in detail in our report Snowpack Distribution Across Grand Teton National Park, Wyoming. This report, along with daily weather data for the area, historical IWS values, and maps of the winter ranges are available online at http://nrin.nbii.gov/climate/.

Overall, the area's snowpack was near or above normal in the higher elevations, but remained below normal at lower elevations. Temperatures were milder than average. Forage production indices for last summer point to below average production on the winter ranges.

Winter Range	For Winter of 2003 up through			
	Jan 1	Feb 1	Mar 1	Apr 1
Elk				
Buffalo Fork/Spread Creek	+0.4	+0.7	0.0	0.0
Gros Ventre/Blacktail	+0.4	+1.3	+2.2	+2.3
Bison				
Buffalo Fork/Spread Creek	-0.4	-0.3	-0.6	-0.8
Gros Ventre/Blacktail	-0.2	+0.6	+1.9	+1.9

-4.0 Worst Winter 0.0 About Average Winter +4.0 Mildest Winter

Index for elk uses 45% snow variable, 35% temperature variable (0°F) and 20% forage variable. Index for bison uses 70% snow variable and 30% forage variable.

The Index of Winter Severity program is a cooperative effort of the USGS Northern Rocky Mountain Science Center's Greater Yellowstone Initiative and Snowcap Hydrology.

Snow Water Equivalent values:

	Snow Water Equivalent, Inches		
	Apr 1	Avg* Apr 1	Percent of Average
Base Camp pillow	20.6	18.1	114%
Darwin Ranch CLIM	4.4	5.9	75%
Elbo Ranch	10.1	11.6	87%
Four Mile Meadow	12.2	12.8	95%
Jackson CLIM	0.0	1.4	0%
Moose CLIM	1.6	6.8	24%
Moran snow course	8.8	12.4	71%
Turpin Meadows	10.5	10.2	103%

* 1971-2000 Base Period
NM – not scheduled for measurement
CLIM SWE is estimated from the weather data. The procedure is described in detail in our report Snowpack Distribution Across Grand Teton National Park, Wyoming.
Note see: http://www.mt.nrcs.usda.gov/swcs/index.html or http://www.wcc.nrcs.usda.gov/water/w_data.html for a complete list of snow measurements in the area.